

# Redmond L

## Lumbar Cage Surgical Technique

Bioactive  
Stand alone design



Utilizes the advantages of  
*Titanium* and *Peek* in one implant



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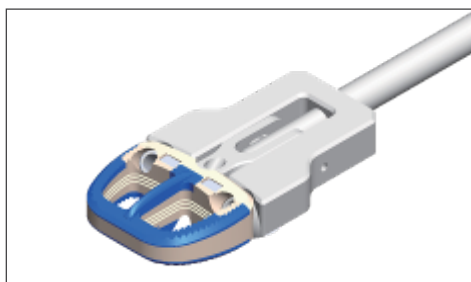


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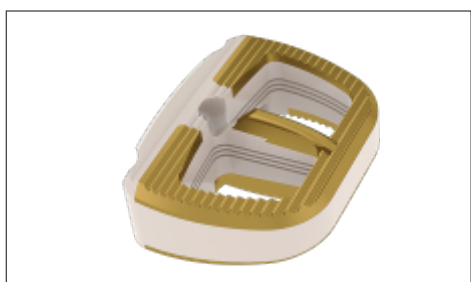


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## Introduction

Redmond® is a kind of none profile ALIF cage which composed of Titanium alloy and Polyether ether ketone (PEEK) for the anterior surgical stabilization of the lumbar spine.

The excellent results of Redmond® treatment of Titanium alloy (Ti-6Al-4V) surface render optimal porosity environment of microporosity.

According on researches, porosity as a contributing factor of bioactive treatment and enhance bone ingrowth.

The elastic modulus of Polyether ether ketone (PEEK) matches cortical bone closely, which characteristic significantly reduce the phenomenon of stress shielding, and thus promotes better bone fusion and prevent implant subsidence.

The material is biocompatible, corrosion-resistant, non-toxic under biological conditions and does not interfere with imaging procedures such as X-ray imaging, computerized tomography.

Please refer to the instructions for use and the instrument processing instructions.

## Indications & Contraindications

### Indications

Redmond® is used in anterior lumbar interbody fusion (ALIF) cages have been used in order to restore the patient's original disc height, aid with stabilisation of the affected segments and provide an environment that will permit solid bony fusion.

#### Indications outside US

1. Use with autogenous bone graft for DDD at 1 or 2 levels from L1 to S1.
2. Grade 1 spondylolisthesis or retrolisthesis at the involved levels.
3. Revision surgery for failed column operation or post-operative instability.
4. Canal stenosis or pseudarthrosis of the lumbar spine

#### Indications US

The Redmond® ALIF Lumbar Cages are indicated for intervertebral body fusion procedures in skeletally mature patients with degenerative disc disease (DDD) of the lumbar spine at one or two contiguous levels from L2-S1. DDD is defined as discogenic pain with degeneration of the disc confirmed by history and radiographic studies. These DDD patients may also have up to Grade I spondylolisthesis or retrolisthesis at the involved level(s).

Redmond ALIF Lumbar Cages are to be used with autogenous bone graft and implanted via an open anterior approach. The Redmond ALIF Lumbar Cages are to be used with screws fixation. Patients should have at least six (6) months of non-operative treatment prior to treatment with an intervertebral cage.

### Contraindications

- \*\* Patients with fever or leukocytosis
- \*\* Patients with infections associated with the spine cesions (e.g. spondylodiscitis)
- \*\* Patients with a history of material allergy or who tend to react to foreign bodies
- \*\* Patients whose general medical or psychological condition is unfavorable for- or could be worsened by the procedure; careful consideration is required on the part of the treating physician/surgeon for these patients
- \*\* Patients with inadequate bone quality or quantity (e.g. severe osteoporosis, osteopenia, osteomyelitis)
- \*\* Pregnancy

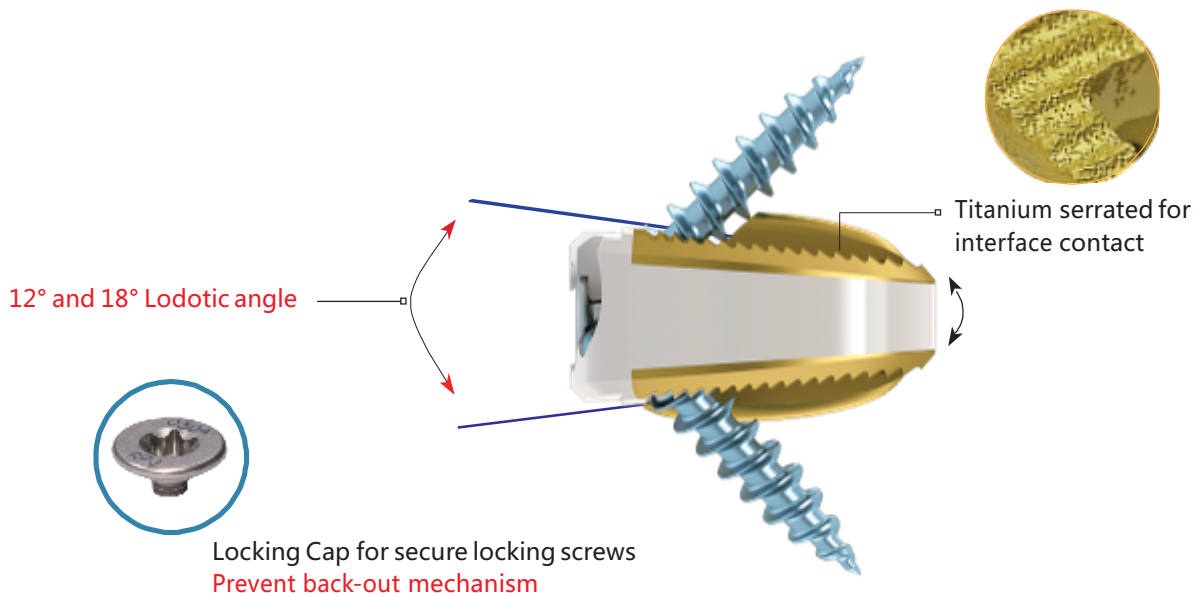
Please note the instructions for use for Redmond® implants and the instrument processing instructions.

## Design Features

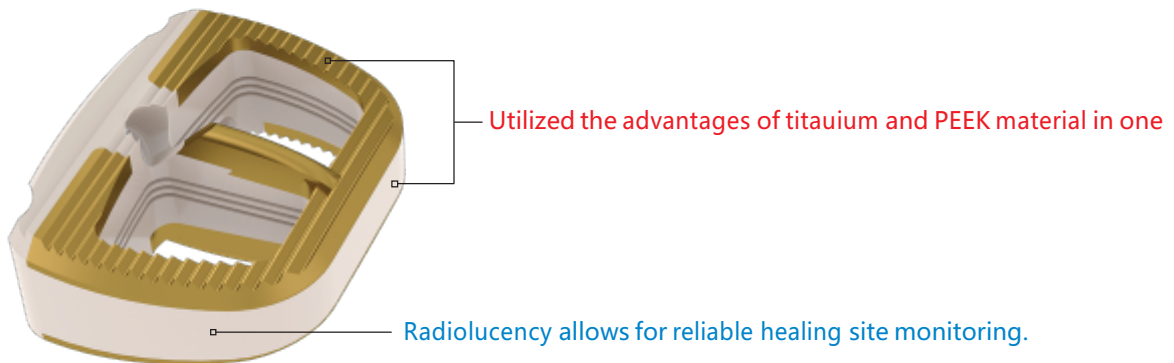
Locking Screw



Locking Cap



Cage size: 12~18mm  
None-profile fixation



## Clinical Outcome:



## Surgical Technique

### Positioning



The patient is placed in the supine position on a radiolucent, operation table and general anesthesia is administered.

### Discectomy



Locate the intervertebral space, resect the remaining nucleus pulposus using the rongeur, the Disc Rongeur (427-7603 ) can be used into the disc space.

**Caution:**

Special attention has to be given to the ascending lumbar vein.

Damage to it can result in profuse bleeding. Please use it with caution.



Curette (429-4201, 429-4202, 429-4203) is moved to remove the superficial cartilaginous layers of the endplate and expose bleeding cancellous bone. Be careful not to remove too much subchondral bone for preventing the implant subsidence.



429-7603

Disc Ronguer



429-4201

Curette Small



429-4202

Curette Medium



429-4203

Cobb Elevator



Distraction



Use Distractor (429-0901) to distract the discectomy site for restoring lordosis and neural foramen.



If it needs to remove vertebral osteophyte, use the Kerrison Ronguer (429-7601, 429-7602)

Prepare Insertion



Lock the Trial (429-0631~429-0659) on the Trial Insertor(429-1702) and tighten it with the Driver of Trial Insertor (429-1703) .

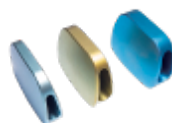
Insert it into the disc space for checking size of implant. Select the implant depending on the final trial size.



429-0901  
Distractor



429-7601 / 429-7602  
Kerrison Ronguer  
4 mm / 6mm



429-09631~429-0659  
Trial

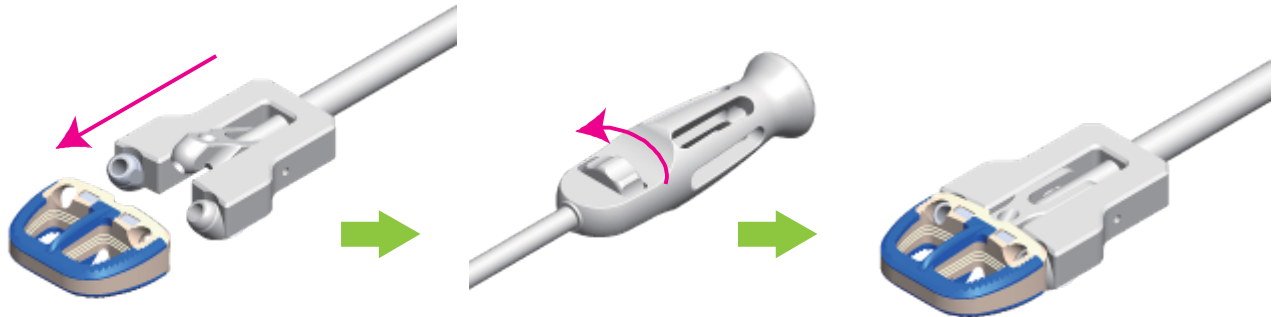


429-1702  
Trial Insertor



429-1703  
Driver of Trial Insertor

Implant the Redmond Cage



Attach the cage to the Redmond lumbar cage Insertor (429-1701) by screwing the handle then cage is inserted to disc space.

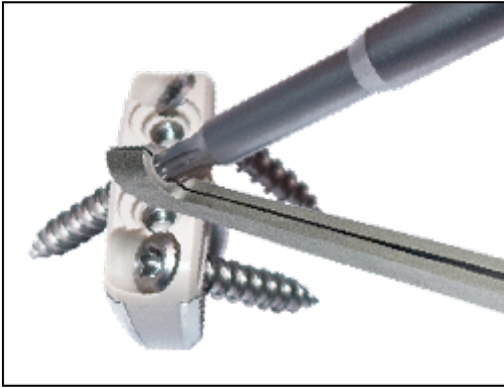


The implant is pre-filled with bone graft by Bone Graft Template (429-2901) and Bone Graft Impactor (218-3301).



Use the Drill Guide (429-1101) or the Redmond lumbar cage Insertor with three holes to be the guide that is depending on surgeon preference. Prepare insertion site of screw by applying pressure on the handle of the Angle Awl (429-0201).





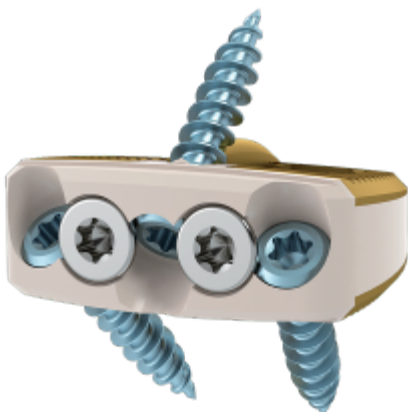
Screw Driver (429-3302) needs to connect the Handle (429-0101) proximal end.

When operate the Angle Screw Driver (429-3301) or Screw Driver (429-3302) to tighten the screws firmly, use the Guided Forcep (429-1303) to fix the angle.



The screw holder (429-1302) is used to carry the required screws to site.

After three screws are being placed, the locking cap will be the prevent back-out mechanism for securing the screws.



429-3302

T25 Screw Driver  
(Straight)

429-0101

Handle

429-3301

Angle Srew Driverep

429-1303

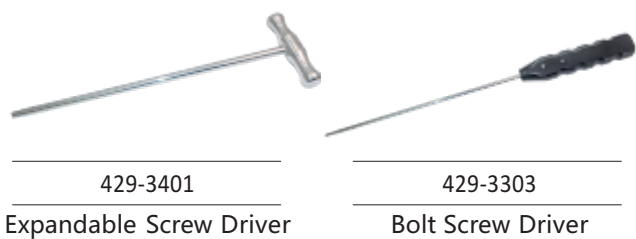
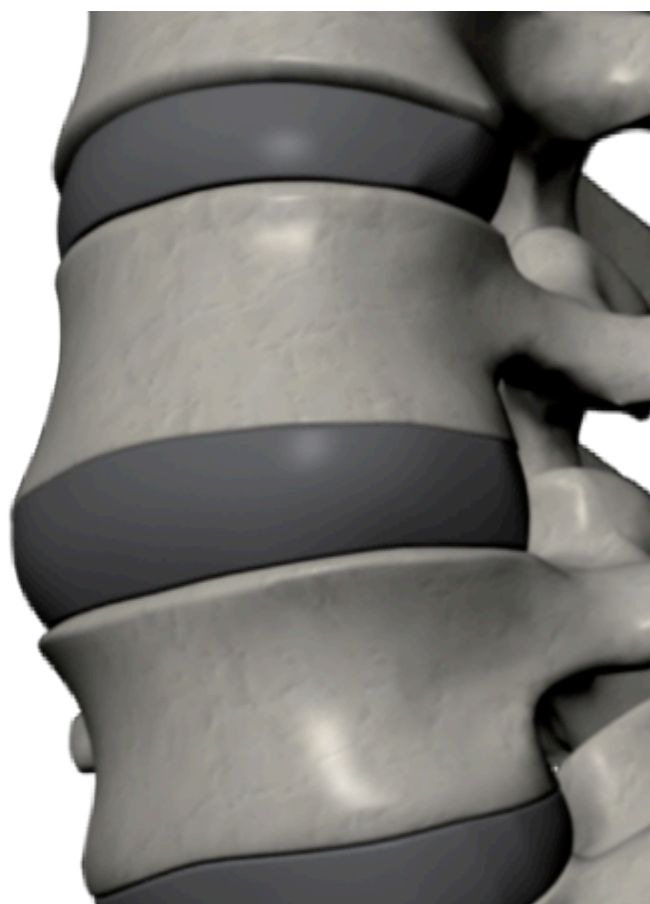
Guided Forcep

429-1302

Screw Holder



Fix the Expandable Screw by Expandable Screw Driver (429-3401), insert Bolt Screw Driver (429-3303) into it and rotate.



429-3401

Expandable Screw Driver

429-3303

Bolt Screw Driver

## Instruments



429-7603  
Disc Ronguer



429-4202  
Curette Medium



429-4201  
Curette Small



429-4203  
Cobb Elevator



429-0901  
Distractor



429-7601  
Kerrison Ronguer 4 mm



429-7602  
Kerrison Ronguer 6 mm



429-1702  
Trial Insertor



429-1703  
Driver of Trial Insertor



429-1701  
Redmond lumbar cage Insertor



429-2901  
Bone Graft Template



218-3301  
Bone Graft Impactor



429-1101  
Drill Guide



429-0201  
Angle Awl



429-3302  
T25 Screw Driver (Straight)



429-0101  
Handle



429-3301  
T25 with Angle Screw Driver



429-1303  
Guided Forcep



429-1302  
Screw Holder



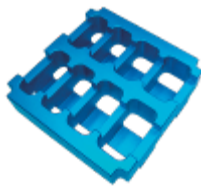
429-3401  
Expandable Screw Driver



429-3303  
Bolt Screw Driver



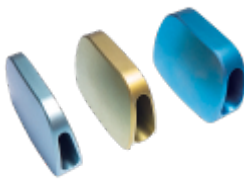
20141-043  
Screw Container



20142-043  
Trial Container



99900-043  
Instruments container



**Trials**

Angle	H / mm	W36xL28mm	W39xL30mm	W43xL32mm
12°	12	429-0631	429-0641	429-0651
	14	429-0632	429-0642	429-0652
	16	429-0633	429-0643	429-0653
	18	429-0634	429-0644	429-0654
18°	12	429-0636	429-0646	429-0656
	14	429-0637	429-0647	429-0657
	16	429-0638	429-0648	429-0658
	18	429-0639	429-0649	429-0659

**Sterilization :**

All implants and instruments should be sterilized by steam autoclave following the instructions of the sterilizer manufacturer according to the type of sterilizer used and the method in accordance with the internal hospital guidelines to achieve the degree of sterility of 10<sup>-6</sup>. The suggested parameters are as follow:

1. Steam Wrapped Gravity Cycle at 121°C / 250°F for 30 minutes.
2. Steam Wrapped Gravity Cycle at 134°C / 273°F for 20 minutes.

## Implants

### Redmond Anterior Lumbar Cage

#### Specifications

A	H / mm	W36xL28mm	W39xL30mm	W43xL32mm
12°	12	5060-1212XH	5060-2212XH	5060-3212XH
	14	5060-1412XH	5060-2412XH	5060-3412XH
	16	5060-1612XH	5060-2612XH	5060-3612XH
	18	5060-1812XH	5060-2812XH	5060-3812XH
18°	12	5060-1218XH	5060-2218XH	5060-3218XH
	14	5060-1418XH	5060-2418XH	5060-3418XH
	16	5060-1618XH	5060-2618XH	5060-3618XH
	18	5060-1818XH	5060-2818XH	5060-3818XH

### Redmond Anterior Lumbar Cage

#### Locking Screw

Cat.No	Dia(mm)	L(mm)
1139-55208	5.5	20
1139-55208	5.5	25
1139-55308	5.5	30
1139-55358	5.5	35



#### Expandable Screw

Cat.No	Dia(mm)	L(mm)
1147-55208	5.5	20
1147-55208	5.5	25
1147-55308	5.5	30
1147-55358	5.5	35

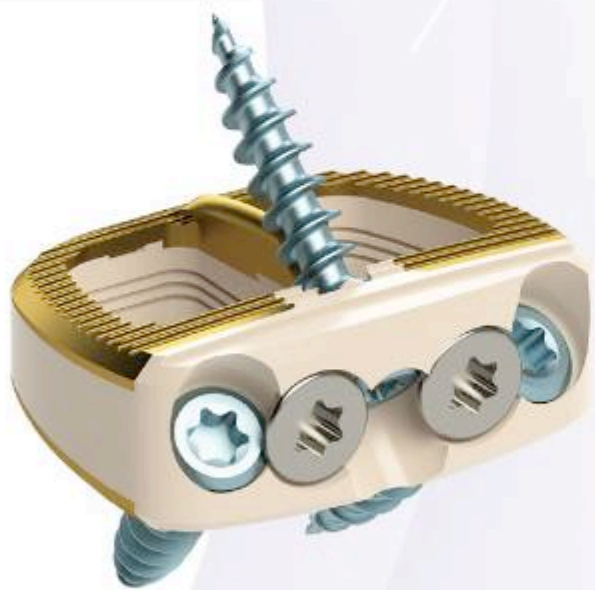


#### Locking Cap

Cat.No	Dia(mm)	L(mm)
1140-03048	3	4







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